

USSR

UDC 621.438-235.5.018.001.24

LEVENBERG, V. D. and ROMANOVSKIY, G. F.

"On An Estimate of the Influence of the Height of the Blades of the Flow Section on the Effectiveness of Two-Rim Active Stages"

Sudostr. i Mor. Sooruzh. Resp. Mezhd. Temat. Nauch.-Tekh. Sh. [Shipbuilding and Marine Installations. Republic Interdepartmental Thematic Scientific Technical Collection], No 16, 1971, pp 32-37 (from Razrabotkiy Zhurnal, Turbostroyeniye, No 49. Single Issue No 2, 1972, Abstract No 2.49.24)

Translation: Results were derived with which one may evaluate the effect of height of the second blade rim on its efficiency and also of the height of blades of the flow section on the effectiveness of the two-rim active stage. It is demonstrated that the efficiency decrease of the two-rim stage by decreasing l/b is more abrupt in comparison with the one-rim stage. The value of η_l has to be rated for the two-rim stage depending on l/b in accordance with the value of η_{001}/η_{000} , where η_{000} is the peripheral efficiency of the first row stage. Since illustr., two biblio. refs.

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UDC 621.438:533.6.001.5

LEVENBERG, V. D., and ROMANOVSKIY, G. P.

"Effect of the Angle of Setting of Stator Blades on the Ventilation Force of a Radial-Axial Turbine Stage"

Sudostr. i Mon. Soorush. Reep. Mezhyed. Tenet. Nauch.-Tekh. Sb. / Shipbuilding and Marine Installations. Republic Interdepartmental Thematic Scientific Technical Collection 7, No 16, 1971, pp 26—29 (from Referativnyi Zhurnal, Turbostroeniye, No 41, Single Issue No 2, 1972, Abstract No 2.49.80)

Translation : Experimental investigation results are presented of the effect of the blade setting angle of the guiding device on the ventilation force in the radial-axial stage. It is demonstrated that the ventilation force

$N_b^{\xi=0}$ depends essentially on the blade setting angle. At setting angles of $\alpha_y = 20$ and 160° for forward and reverse rotations, the dimension

$N_b^{\xi=0}$ remains

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LEVENBERG, V. D. and ROMANOVSKIY, G. F., Sudost. i Mpr. Stroyish. Posp.
Mekhved. Temat. Nauch.-Tekh. Sb. No 16, 1971, pp 26-29

its maximum value and exceeds approximately by 2.5 times ϵ_{max}

by $\alpha_0 = 0$. The obtained data permit to consider the effect of
blade setting angles on the ventilation force by forward and re-
verse rotations of the rotor. Four illustr., three biblio. refs.

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S/019/62/000/013/023/058
A154/A125

9.2560

AUTHOR: Levenberg, Ya.S.

TITLE: A method of multiplying analog values

PERIODICAL: Byulleten' izobreteniy, no. 13, 1962, 34.

TEXT: Class 42d, 10. No. 148539 (738060/25 of July 14, 1961). This method of multiplying analog values is distinguished by the fact that use is made of the linear relationship between the direct transconductance (krutizna pryamoy kharakteristiki) of a semiconductor diode and a displacement current proportional to the magnitude of one of the factors. The other factor is introduced into the diode circuit in the form of an AC amplitude. The voltage proportional to the product is picked up from a resistor connected in series with the diode.

[Abstractor's note: Complete translation]

Card 1/1

Oncology

UDC 616-006-092.9-022:6:576.858.5

USSR

STRIZHACHENKO, N. M., GRAYEVSKAYA, N. A., and LEVENTUK, I. S., All-Union Institute of Experimental Veterinary Science, Institute of Poliomyelitis and Virus Encephalitis, and State Control Institute of Medical Biological Preparations imeni L. A. Tarasevich, Moscow

"Some Biological Properties and Morphological Characteristics of a Transplantable Tumor Induced in Hamsters by Bovine Adenovirus Type 3"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 80-82

Abstract: A type 3 adenovirus isolated from a healthy cow was pathogenic for hamsters, producing tumors in them (J. H. Darbyshire, et al., Nature, Vol 211, p 102, 1966; J. Comp. Path., Vol 75, p 327, 1965). The oncogenic strain WBR-1 of the virus in question, which was obtained from Darbyshire, was used in experiments on the transplantation of tumors in hamsters. The tumors (BATH) were highly transplantable; within 5-6 days 100 percent of the implanted cells became adapted to hamsters of any age. The high transplantability was due to an absence of transplantation antigens in the passaged tumors. The initial tumor and the transplanted tumors could be classified as angioendothelial sarcoma of the malignant hemangioendothelioma type. The tendency towards formation of

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STRIZHACHENKO, N. M., et al., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 80-82

blood vessels in the tumors was preserved up to the 50-60th passage of the tumor and then disappeared, whereupon the tumors changed to the undifferentiated sarcoma type. The BATH cells underwent more than 60 passages in hamsters. These cells and the tumors produced by them appear to be good models for the study of problems pertaining to virus-induced cancer formation.

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UDC 616.9-053.2-084.47-06-091+615.371/.372.065

LEVENBUK, I. S., CHEBOTAREVA, S. V., and CHERTKOVA, F. A., Control Institute
of Biomedical Preparations imeni Tarasevich

"Clinical and Anatomical Analysis of Some Postvaccinal Complications in
Children"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971,
pp 55-59

Abstract: Study of the case histories, autopsy findings, and results of
histological examinations of 20 children under 3-1/2 years of age who died
after receiving inoculations of associated whooping cough -- diphtheria --
tetanus vaccines, diphtheria-tetanus or diphtheria toxoids showed that most
of them had been vaccinated against a background of some chronic or acute
disease (bronchitis, enterocolitis, pneumonia, etc.). Death occurred within
10 hours to 2 days in 15 children, within 7 to 13 days in four, and almost
immediately in one as a result of anaphylactic shock. Death was generally
preceded by symptoms of encephalopathy. In three cases where the presence
of prevaccination disease could not be determined, there were references in
the case histories to constitutional anomalies, including allergic diathesis
and spasmophilia.

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USSR

Radar

UDC 621.391.82

ANDREYEV, G. A., LEVENETS, B. P., MAGID, R. M., KHOKHLOV, G. I., Gor'kiy
State University

"Effect of Additive and Multiplicative Noise on the Accuracy of Measuring the
Angular Position of a Radiation Source by Systems with Pulse-Duration Modula-
tion"

Gor'kiy, Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, Vol XV, No 9,
1972, pp 1367-1375

Abstract: Theoretical expressions were obtained for the mean square error in
measuring the angular position of a radiation source by the pulse-time method
under the effect of additive and multiplicative noise. The relative error
caused by multiplicative noise significantly exceeds that caused by additive
noise. This is explained by the fact that the multiplicative noise is not
equivalent to additive noise with respect to the parameters of the spectrum.
Multiplicative noise can be reduced by lowering the response threshold, in-
creasing the integration time by comparison with the correlation time or
attenuating the depth of the random modulation of the received signal. The
implemented measuring system provides an accuracy which is $\sqrt{2}$ times less than
the potential accuracy.

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Acc. Nr

AP0101491

Abstracting Service:

CHEMICAL ABST.

Ref. Code

URD 498

112319s Use of naphthenates in the leather industry. Strakhov, I. P.; Levchenko, P. I.; Shifrin, I. G. (USSR). *Kozh. (Jbur. Prom. 1970, 12(11), 23-6 (Russ).* In the prepn. of Russian leather, the usual fatting compd., 20% tanning paste and 80% synthetic fat, was replaced by 20% tanning paste, 40% synthetic fat, 20% Al naphthenate, and 20% Zr naphthenate. In chrome-tanned shoe-upper leather, the usual filler, latex MX-30 + synlac SPS, was replaced by latex MX-30 + Al naphthenate, or synlac SPS + Al naphthenate. In all cases, improvement was obtained in wearability, stretching limit, elongation, redn. of water permeability, and wettability by water. These improvements were still further increased by irradiation of the finished leather with γ -rays from ^{60}Co at a dosage of 0.5×10^6 rads. A. S. Lavesley

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Soviet Inventions Illustrated, Section I Chemical, Derwent,

240702 UREA PRODUCTION from NH_3 & CO_2 , using converted natural gas as CO_2 source, and as H_2 source for NH_3 synthesis, is intensified and energy losses reduced, by total or partial injection of the converted natural gas feed at 30 kg/cm² with ammonium carbonate solution and liquid ammonia at 600-1000 kg/cm² to absorb CO_2 from the feed. Part of the converted natural gas is compressed and introduced at the base of the urea synthesis tower, at a temp. higher than the temp. of synthesis, and assists concentration of the urea melt. 6.7.67. as 1171649/23-26, GORLOVSKII, D.M. et al. (12.8.69) Bul. 13/1.4.69. Class 12o, Int. Cl. C 07c.

19750354

AA0040714

AUTHORS: Gorlovskiy, D. M.; Kucheryavyy, V. I.; Lubadev, V. V.;
Aj'tshuler, L. N.; Levenkova, N. I.; Mal'nikov, B. P.;
and Gurenyuk, A. I.

19750355

USSR

UDC 547.242+546.19:546.221

KAMAY, G. Kh. (Deceased), CHERNOKAL'SKIY, B. D., and LEWENSHTEYN, I. B.,
Kazan' Institute of Chemical Technology imeni S. M. Kirov

"Feasible Mechanism for the Reaction of Tertiary Arsine Sulfides With
Alkyl Halides"

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 2015-2020

Abstract: The purpose of this study was the synthesis of alkylarsonium salts and other products of the reaction $R_3AsS + AlkI \rightarrow [R_3AsAlk]I$. It is shown that the formation of quaternary arsonium salts by the reaction of tertiary arsine sulfides with alkyl halides is common for both triaryl- and trialkyl arsine sulfides. The other reaction products, in addition to tertiary arsines and arsonium salts, include dialkyl disulfides and trialkylsulfonium halides. The conversion of alkylthioarsonium to tertiary arsine is effected by the halogen anion. The mechanism of the reaction is discussed.

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USSR

UDC 547.241+546.19:546.221

CHERNOKAL'SKIY, B. D., LEVENSHTYN, I. B., and KAMAY, G. Kh., (deceased)
Kazan' Chemical-Technological Institute imeni S. M. Kirov

"Synthesis of Alkylthioarsonium Salts"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 3, Mar 71, pp 557-559

Abstract: Reactions of triethyl- and tripropylarsine sulfides with alkyl halides were studied at room temperature either in benzene or in an excess of the alkylating reagent. Reactions lasted from 5.5 hrs to several days, yielding trialkylalkylthioarsonium salts — hygroscopic crystalline compounds soluble in acetone and methylene chloride but insoluble in ether and benzene. Above sulfides as well as the triphenylarsine sulfide react with trialkyloxoniumtetrafluoroborates forming alkylthioarsonium salts.

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USSR

UDC: 547.242 + 546.19:546.221

CHERNOKAL'SKIY, B. D., LEVENSHTeyN, I. B., and KAMAY, G. Kh., Kazan' Institute of Chemical Technology imeni S. M. Kirova

"Products of the Reaction of Triphenylarsine Sulfide with Alkyl Halides"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No. 1, Jan 70, pp 146-151

Abstract: The mechanism of the title reactions was studied, because stability of the arsenic-aryl bond in pyrolytic processes is higher than that of the arsenic-alkyl bond. The main product of the reactions of triphenylarsine sulfide with methyl, ethyl, or propyl iodides was alkyltriphenylarsonium triiodide (I). Alkyltriphenylarsonium iodide crystals were also separated, along with I, but in lower yields from the reaction products with methyl and ethyl iodides. In one instance, 5% triphenylarsine was separated in the reaction with ethyl iodide. All alkyltriphenylarsonium iodides were obtained in crystal form. Triiodide I heated with mercury in acetone gave after several hours crystals of alkyltriphenylarsonium triiodomercurate (II) in 42-70% yields. Also, methyltriphenylarsonium tetraiodomercurate crystals were separated (yield 22.5%) from the reaction product, probably because of disproportionation of II during crystallization. Melting points of the above mercury compounds were determined.

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UDC 547.242+546.19:546.221

CHERNOKAL'SKIY, B. D., LEVENSHTeyN, I. B., and KAMAY, G. Kh., (deceased)
Kazan' Chemical-Technological Institute named S. M. Kirov

"Synthesis of Alkylthioarsonium Salts"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 3, Mar 71, pp 557-559

Abstract: Reactions of triethyl- and tripropylarsine sulfides with alkyl halides were studied at room temperature either in benzene or in an excess of the alkylating reagent. Reactions lasted from 5.5 hrs to several days, yielding trialkylalkylthioarsonium salts -- hygroscopic crystalline compounds soluble in acetone and methylene chloride but insoluble in ether and benzene. Above sulfides as well as the triphenylarsine sulfide react with trialkyloxoniumtetrafluoroborates forming alkylthioarsonium salts.

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UDC 59(093.32) : 591.9(265)

USSR

BEKKER, V. E., ZEZINA, O. N., ~~LEVENSTEV, R. Ya.~~, and MEL'NIKOV, I. A.,
Institute of Oceanology, Academy of Sciences, USSR

"Zoological Studies During the 48th Voyage of the Scientific Research Ship
Vityaz in the Central Part of the Pacific Ocean"

Moscow, Zoologicheskii Zhurnal, Vol 50, No 6, Jun 71, pp 955-957

Abstract: A study was made of oceanic and ocean floor fauna of the Pacific Ocean over the Milwaukee banks, at Fiji, Tonga, Rarotonga, Auckland, Curtis Island, Penryn Atoll, and Honolulu. Two hundred and ten tanks yielded 115 species belonging to 74 genera and 46 families, including some very rare specimens. Data were obtained on fishing grounds for blue fin and Pterolamiops longimanus sharks. Most numerous in the collections were flying fish of the Exocoetidae family and phosphorescent anchovies of the Nyctophidae family (including the Diaphus regani caught at 18°1' southern latitude and 176°43' eastern longitude, which had previously been classified among the west-equatorial species). Hatchlings and fingerlings of Exocoetus sp., Hirundinichthys, and others were encountered on the surface of the water only during daytime, with fewer of their longer specimens caught during daytime, and still

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BEKKER, V. E., et al., Zoologicheskii Zhurnal, Vol 50, No 6, Jun 71, pp 955-957

larger ones -- only at night. The greatest abundance of fingerlings was found in the regions where the northern and southern tropical currents meet, and the poorest catches were in equatorial waters. Sea bottom investigations in the low-productivity oligotrophic areas of the Pacific Ocean confirmed the general sparseness of fauna, with a predominance of Foraminifera, small glass sponges, Scyphozoa, and Serpulidae. A general similarity of the fauna of the Tonga and Kermadec trough was revealed, with several live species found in the Tonga basin for the first time. Biochemical investigations and quantitative analyses of easily assimilated organic substance of the superficial layer of deep-water sediment were also done.

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USSR

UDC: 532.529

EL'PERIN, I. T., MEL'TSEV, V. L., LEVINTAL', I. I.

"Motion of a Solid Particle in Head-on Gas Jets"

V sb. Teplo- i massopereenos v apparatakh s dispersn. sistemami (Heat and Mass Transfer in Devices With Disperse Systems--collection of works), Minsk, "Nauka i tekhn.", 1970, pp 83-91 (from RZh-Mekhanika, No 4, Apr 71, Abstract No 4B920)

Translation: The motion of a solid particle in opposed gas jets is analytically considered for the self-similar, transition and Stokes regions of the law of resistances. Generalized analytical relationships are found which permit approximate calculation of the basic parameters of motion of the particles in the acceleration section and in the zone of collisions of the jets. It is shown that use of the method of opposed jets makes it possible to increase the stay of the solid phase as compared with ordinary flows of a gas suspension. Authors' abstract.

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UDC: Kone

LOSKUTOV, Yu. M. and LEVENTUYEV, V. P.

"Resonance Scattering of Electromagnetic Waves by Electrons in a Magnetic Field and Electron Polarization"

Moscow, Yadernaya Fizika, Vol. 11, No. 2, 1970, pp 411-415

Abstract: Resonance phenomena, are observed when the energy of a photon incident on electrons in a magnetic field coincides with the difference between electron energy levels, can be observed only in the presence of clearly expressed energy levels, when the width of the level is much less than the difference between two neighboring levels. With the scattering of electromagnetic waves by electrons moving in the magnetic field, this condition is satisfied only at comparatively high electron energies. The author analyzes the relativistic and non-relativistic cases and obtains the scattering cross section as a function of the frequency and angular distribution of the primary photons and of the electron polarization. He shows that the electron beam is polarized during resonance scattering and points out that the resonance scattering process may to some extent be controlled by the intensity of the incident photon beam.

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REEL # 17
KUROV, G.A.
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LEVENTUYEV, VP